

Virginia WILDLIFE

JULY, 1952



VOLUME XIII

Price 15 cents

NUMBER 7



Photo by H. Armstrong Roberts

"Going Fishin' "

A Virginia sportsman goes after bream at an early age

Virginia WILDLIFE

Published by VIRGINIA COMMISSION OF GAME AND INLAND FISHERIES, Richmond 13, Virginia

A Monthly Magazine Dedicated to the Conservation, Restoration, and Wise Use of Virginia's Wildlife and Related Natural Resources, and to the Betterment of Hunting and Fishing in Virginia

COMMONWEALTH OF VIRGINIA



JOHN S. BATTLE, Governor
Commission of Game and Inland Fisheries

COMMISSIONERS

B. W. STRAS, JR., *Chairman, Tazewell*

CHAS. D. ANDREWS . . . Suffolk	DR. E. C. NETTLES . . . Wakefield
FRANK P. BURTON . . . Stuart	DR. WM. T. PUGH . . . Lynchburg
WM. C. GLOTH, JR. . . Arlington	DR. W. B. RAINS . . . Warsaw
T. G. HERRING, RFD . . Dayton	T. D. WATKINS . . . Midlothian

I. T. QUINN
Executive Director

EVELYN M. PARIS
Assistant Executive Director

DIVISION CHIEFS

CHESTER F. PHELPS	<i>Game</i>
G. W. BULLER	<i>Fish</i>
LILLIAN B. LAYNE	<i>Fiscal</i>
J. J. SHOMON	<i>Education</i>
WEBB MIDYETTE	<i>Law Enforcement</i>

VOLUME XIII, JULY, 1952 No. 7

In This Issue

Wildlife Values	4
Four Years of Wildlife Restoration Effort in Virginia	5
Our Soil—A Local, State and National Problem	9
Conservationgram	13
Virginia's Outdoor Heritage	14
The Growth of Forestry in Virginia	16
Thievery in Game Can Be Broken	19
Tick and Chigger Control	21
Virginia Furbearer Series	22
Virginia Game Bird Series	23
Field Force Notes	24
Drumming Log	25
Wildlife Questions and Answers	26

Cover

A rare Virginia bird is the American golden eagle. This specimen was photographed at V. P. I. where it was being treated for an injured wing. It was later released

Photo by L. G. Kesteloo

PUBLICATION OFFICE: Commission of Game and Inland Fisheries, 7 North Second Street, Richmond 13, Virginia

EDITOR: J. J. SHOMON

R. R. BOWERS, *Associate Editor*

L. G. KESTELOO, *Photography*

F. S. MCDANIEL, *Circulation*

SUBSCRIPTIONS: One Year, \$1.00; two years, \$1.50; three years, \$2.00. Remittances by check or money order to be made payable to the Treasurer of Virginia. Local game wardens will accept subscriptions or they may be forwarded direct to Commission of Game and Inland Fisheries, 7 North Second Street, Richmond 13, Virginia.

VIRGINIA WILDLIFE is published monthly at Richmond 13, Virginia, by the Commission of Game and Inland Fisheries, 7 North Second Street. All magazine subscriptions, change of address notices, and inquiries should be sent to VIRGINIA WILDLIFE, P. O. Box 1642, Richmond Virginia. The editorial office gratefully receives for publication all news items, articles, photographs, sketches, and other materials which deal with the wise use and management and study of Virginia's inter-related, renewable resources: soils, water, forests and wildlife. Since wildlife is a beneficiary of the work done by state and federal land-use agencies in Virginia, editorial policy provides for full recognition of their accomplishments and solicitations of their contributions. Credit is given on material published. Permission to reprint is granted provided proper credit is given the Virginia Commission of Game and Inland Fisheries and VIRGINIA WILDLIFE.

Entered as a second class mail matter, November 10, 1947, at the post office in Richmond, Virginia, under the act of August 24, 1912

Wildlife Values

Like the adolescent bark of a cocker spaniel, the sharp call of the red fox rings through the midnight woods—a hidden thrush sings its *ee-o-lee* among the hardwoods—crimson tanagers flash their beauty in a sugar maple grove—the friendly bobwhite heralds the warm days of spring with its captivating whistle.

Whether we think much about it or not these things are part of the great joy of life of countless Americans. In a troubled world their loss would be tragic. Their gradual disappearance under the sure hoof of pounding civilization would be a sad commentary on the wisdom of man and his reckless way of life.

In a world run by dollars and cents it is sometimes hard to appreciate other values. Yet we all know that other values exist and that these special values can't be bought by "greenbacks." Can we buy the smell of blossoming honeysuckle? Can we exchange dollars for the sight of a cardinal boldly pecking away on sunflower seed at the window feeding station? Can we say "charge it" to the plaintive call of a cooing mourning dove in the poplars? What about the exhilaration that comes to a man on a trout stream when a big and flashing rainbow snaps up a well placed bivisible?

No, these things are intangible. They cannot be measured by a price tag. *That* they exist and *are needed* for wholesome, pleasurable living cannot be denied. Likewise it cannot be denied that countless Americans spend great sums of money to obtain these intangibles. So, no matter how we try to measure the intangibles, we know they are there, and, we know they are worth preserving and fighting for.

Wildlife is but one resource. It has benefits far beyond mere economics, just as trees are valuable other than for the lumber they can produce. The biological influence of wildlife in nature's complex plant and animal community is far-reaching, intricate, still baffling to man in many many phases. Yet we can see the effect; we know it exists. The value is there.

Thus, the conservation of wildlife—and this goes for the wise use of all natural resources, for they are related and interdependent—is basic in its benefits. We can no more do without wildlife than we can do without plants or soil or water. They are all life's sustaining resources and their intelligent care and sensible use is tied in directly with our future.

Wildlife means more to all of us than just the mere production of fish and game. In the fight for its safekeeping, other values are at stake—values which if they could be measured would reveal riches far greater than anything of gold and silver.

What is at stake in the conservation of wildlife is not only the future of hunting and fishing, but the long-time basic values that have elevated man above the animals themselves and have given him inspiration for real living. What is at stake is America itself and the opportunity to enjoy the little pleasurable things that make life enjoyable in a free atmosphere.—J. J. S.

4 Great
Years
of

WILDLIFE RESTORATION

Effort
in Virginia

By

I. T. QUINN

Executive Director

*An administrator's report to the citizens of the Commonwealth
on Virginia's modern long range program of game and fish restoration*

FOUR YEARS of concerted action by your Virginia Commission of Game and Inland Fisheries has produced some amazing results in game and fish restoration. In a few instances, not all was accomplished as set down in the so-called five-year program launched in July, 1948. On the whole, however, much more has been accomplished than was originally set down.

This, then, is a report—a sort of brief summarization—of just how we have fared under that program, the progress made, accomplishments achieved, and *our* shortcomings.

Reports sometimes—probably too often—can be mighty dull reading and it is not my intention here to burden the reader with a lot of uninteresting statistics. I would rather present the over-all broad picture of wildlife restoration accomplishments and only bring in figures and percentages when needed.

The hunters and fishermen of Virginia have a right to know how the Commission is utilizing the monies from the "Game Protection Fund"; they have a right to the wise and efficient use of their wildlife dollar; they have a right to see that good administration is achieved and that a wise program of game and fish rehabilitation is put into effect. Because the Commission is a self supporting, independent state agency, supported only by hunting and fishing licenses and 15 per cent dog license revenue, the sportsmen are interested and should know how the game proceeds are spent, and what is being accomplished. But at the same time the public at large is interested in the state's wildlife program. Your Game Commission is not only interested in safeguarding and bettering hunting and fishing, but is also keenly interested in the wise-use of all wildlife resources: the non-game mammals, non-game birds, and the lower vertebrate animals.

So the outlook of your game agency is, first of all, a broad viewpoint. It is the modern concept. It is the scientific approach.

Slightly over four years ago, when wildlife interest in the Commonwealth persuaded the General Assembly to raise hunting and fishing licenses to give the state a *real* wildlife program, there was a hesitancy in some circles. "What," said some, "... give the Game Commission more money! For what?"

But far-sighted individuals saw the handwriting on the wall: reduced purchasing power of the dollar, steadily rising gun and fish pressure, a sadly lacking education program, only mediocre law enforcement, depleting game and fish habitat.

Something had to be done and only money could do it. So the bill went through and your Game Commission for the first time received substantial revenue with which to do a creditable job:

The increase in funds jumped from \$1,674,419.61 in 1947 to \$1,996,461.24 in 1948, a sizeable increase to be sure, yet not as great as might appear on the surface due to the toppling value of the dollar. But it was a forward step and the Commission resolved to do something about it and do it wisely. Result: the start of the Commission's five-year, long-range program of wildlife restoration.

Space does not permit me to go into the details of this program but I might say that it included certain broad objectives, policies, and some definite commitments in game, fish, fiscal affairs, education, and law enforcement as to just what the Commission would set out to do.

In the four years that have gone by under the long-range program, here is what has been accomplished in very broad terms: a set of definite policies and objectives have been adapted; game restoration activities were greatly expanded, fish restocking and fisheries research and management were augmented, law enforcement was improved, fiscal affairs became more solid, and educational activities witnessed expansion.

To the average "one gallus man" this may not mean much, just a lot of nice statements. So let's have a closer look. In most cases we did more than we said we would, in a few ways, less.

Take game for example. Our co-operative work on the national forests and the state forests, involving mostly the improving of the land (habitat) for forest game, was augmented each year by 15 per cent. Wise deer management has given us a steadily increasing deer herd. In 1947 there were 73 counties open to deer hunting and the kill was 3,985; this past season we had 76 counties open to deer hunting and the kill shot up to 7,514. We have more deer today than we have had in 50 years. Phenomenal increases in raccoons have also been made through a careful trapping and transplanting program. Beaver have come back strong. Opossum, grouse and squirrels are showing improvement in some areas.

In 1948 the Commission's farm-game program for quail and rabbits was just starting. Food and cover was found to be the big answer to more wildlife and the game division decided to augment its present habitat restoration program. Since then a state-wide organization has been completed to help produce and distribute wildlife planting materials. Work has been co-ordinated with the soil conservation districts, game technicians, game wardens, and organized sportsmen making it simple for any interested landowner to secure materials and technical advice anywhere in the state.

We have reduced the cost of planting materials by 50 per cent through the establishment of our own seed producing blocks and plant nurseries. Furthermore, in co-operation with the soil conservation personnel, we have improved the variety of bicolor lespedeza. In 1948 only comparatively late seed varieties were available and they were suitable for use only east of the Blue Ridge. Now we have earlier seeding varieties in practically all sections of the state, including areas west of the Blue Ridge where early frosts are common. This work is continuing and in a few years we confidently predict even better varieties will be available.

Another example of Commission progress in game is that now we are distributing the Arlington strain of sericea lespedeza. This strain is not generally available from commercial nurseries, and it produces more stalks per plant and a better quality of hay. This is in keeping with the Commission policy of having plants serve a dual purpose of game food as well as making a worth-while contribution to the Virginia economy.



Top: Food and cover were found to be the answer to more wildlife, and the planting program was expanded

Bottom: The program called for a new hatchery and the bass hatchery at Marion is nearing completion

The Commission work in turkey restoration is being carefully checked by follow-up research, designed to measure the effectiveness of various restocking methods and practices that should be put into effect to maintain and increase our native wild birds wherever they occur.

In fisheries work our long-range program called for a new fish hatchery and certain improvements, expansion of restocking activities, public pond construction, and fisheries investigations. In only one phase of this work have we fallen short, the construction of one public fish pond each year. Certain critical war materials have held up this part of the program but as materials become available pond construction will continue.

The Commission now has five fish hatcheries and fish restocking is going ahead at full pace. During the past four years some 550 tons of two-year-old trout have been placed in the state's 143 trout streams while an additional 350 tons of bass and other game fishes have been placed in the warmer public waters.

In fisheries investigations we have not stood still. In

1948 it was decided that fish should be observed in their native home; that is, under the surface of the water rather than to make deductions about fish and fishing based on public opinion and hearsay. In June of 1948 the first fisheries biologist was employed to investigate the fisheries problems of one of the larger impoundments of the state.

The first full time fisheries biologist was employed on January 1, 1950, to serve as assistant chief of the fish division. The second fisheries biologist was employed in June of 1951. During the past two years these biologists have interviewed fishermen as they caught their fish and have gone under the surface of the water with their nets and seines. To date, most of the fisheries management work has been on impoundments ranging in size from 60 to 30,000 acres.

The investigations to date have indicated that nature plays a larger part in controlling the fish population than the anglers. Contrary to popular public opinion, the fishermen are not harvesting as many fish as they should from the lakes and impoundments, and other public waters of the state.

The program has established a need for liberalizing fishing regulations and for stocking only those waters which have been depleted of a desirable species of fish.

The Commission's law enforcement division made significant strides during the past four years. Not only has greater efficiency in enforcement been effected by better patrolling and use of the airplane and radio, but the wardens themselves have become better trained, better equipped, better paid. Our warden service, all around, is now more efficient. Total convictions during the past four years ran better than 8,000 for game, 9,500 for fish, and 16,000 for dog violations. Furthermore, some 130,000 unclaimed, loose running dogs were disposed of. Wardens and conservation officers now attend an annual warden's school and have expanded their work to include game and fish restoration activities, public relations, and education.

In the field of education nearly all phases of public information and education work have been expanded. The Commission's conservation magazine has been improved and paid circulation increased from 4,000 to 12,500.

A weekly news service was launched and is continuing, together with regular appearances of the executive director's educational bulletin. Radio and television programs are regularly scheduled over Richmond stations.

A motion picture loan service has been created and 40 education films have been added to the library. Five new wildlife movies, all in sound and color, have been produced by the Commission and represent the biggest single achievement in audio-visual work to date. During the past four years well over 150,000 Virginians have viewed Commission films.

In addition to films, the Commission has expanded its work with schools and clubs and has launched a limited exhibit program through its special services facilities. Work with youth groups is progressing well.

In special publications work, the Commission has published several educational booklets, pamphlets, and charts



Top: Greater efficiency in law enforcement has been effected by better patrolling and use of airplane and radio

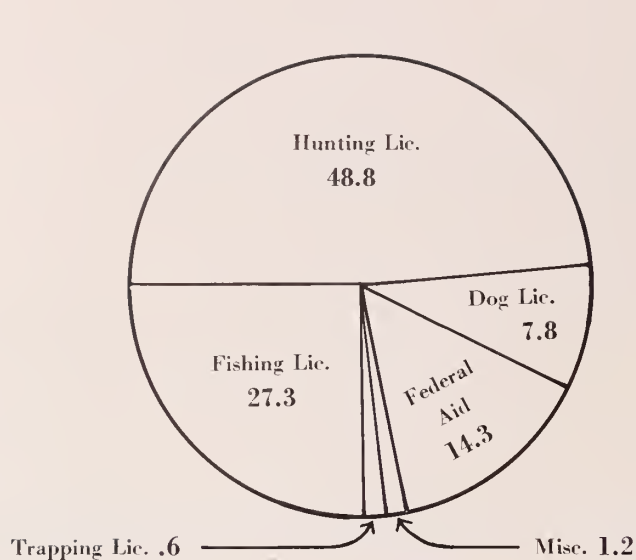
Bottom: In the educational field nearly all phases of public information and education work have been expanded

and hopes to meet its commitment of additional ones each year.

In fiscal affairs, careful accounting of all expenditures has been maintained throughout the past four years and a clean bill of health by the state auditor given the Commission. Revenue to the Commission is derived from the sales of hunting, fishing and trapping licenses, 15 per cent of the income from dog licenses, federal aid appropriations (Pittman-Robertson funds and Dingell-Johnson funds), the sale of publications and other miscellaneous items. All monies go into the special "Game Protection Fund" and no public tax money is used by the Commission in its wildlife conservation work, its activity being entirely self-supporting. The Commission also contributes to the "State Literary Fund" by law enforcement "fines." This contribution runs around \$55,000 annually.

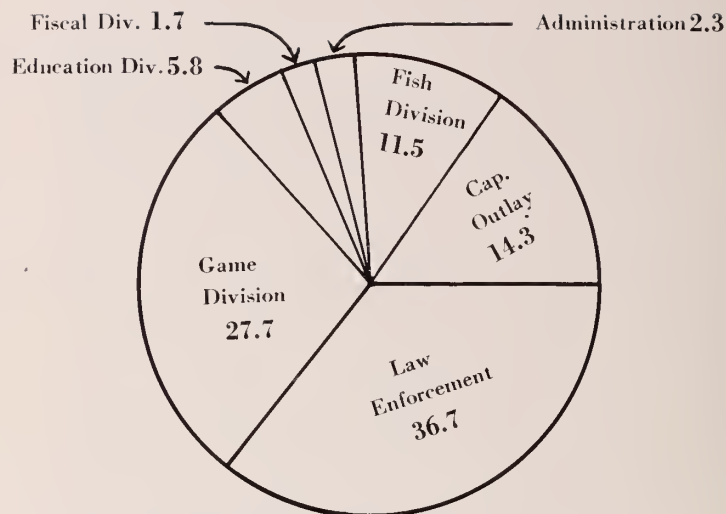
Summary

I have not attempted to give you, the sportsmen and



HOW MONEY WAS RECEIVED, 1950-51

conservationists of the Commonwealth, anything definite on our future program. There is good reason for this. In the first place we are still on our first five-year program but in the last of that program. When this fiscal year ends, which is June 30, 1953, I can assure you there will be



HOW MONEY WAS SPENT, 1950-51

another program—a program long-range in scope, coupled with the best that scientific game and fish management can give us, and a program well publicized and well balanced so as to assure *all* Virginians an ever expanding wildlife heritage for many years to come.

NEW IMPOUNDMENT - Good Fishing

By ROBERT MARTIN, *fish technician*

SOUTH HOLSTON RESERVOIR, the newest fishing waters in Virginia, provided excellent fishing on opening day of the season, May 30. The South Holston, a TVA reservoir located in both Tennessee and Virginia, is expected to produce good fishing for at least three years, and even after that it will be the favorite spot of southwest Virginia. Just to give an idea of the fisherman's success on the opening day, here are some details: Fishermen poured over one of the boat docks so fast that it was impossible for one man to contact more than 30 per cent. The creel census man did, however, interview 164 boat fishermen and 33 shore fishermen. The boys with artificial lures took more bass than fishermen using live baits. The 164 boat fishermen fished nearly 1,000 hours to catch 1,000 fish, averaging one fish per hour. The shore fisherman fared better and obtained 2.6 fish per hour. The carp catch was the highest. Twenty-eight per cent of the fish taken by boat fishermen were carp. They comprised 52 per cent of the shore fisherman's take. Nineteen per cent of the fish taken were largemouth and 16 per cent smallmouth. The redeye proved popular and made up 27 per cent of the catch. The bluegills were on hand to give the children a thrill.

The carp ranged between 8 and 14 inches in length. They were almost all last year's spawn. The bass have made

better growth than had been anticipated; however, most of them were under 14 inches. Ten to 12 inches was the most common length. As in all waters, the largemouth tends to grow faster than the smallmouth. A few fishermen caught some brood bass which had been in the river before the



A Typical Catch on Holston

water backed up. Decaying vegetation, which has just been submerged, will keep water fertility high for the next two years; hence, the fishermen may expect good fishing for at least this period of time. As the impoundment becomes older, the fish will become larger and fewer. In other words, three of the 10" bass this year might be replaced by one 16" bass two years from now. Carp will be important in next year's catch; however, after the reservoir is completely filled and the water levels begin to fluctuate, it is to be expected that the carp fishermen will have more difficulty. The forecast for the South Holston Reservoir is that fishing will remain good this year, and next year more pounds of fish will

be caught than this season, even though the numbers will be fewer. Very few crappie were available this year, but within the next two years they should provide some good fishing. The concluding statement for the opening day of the fishing season in the South Holston Reservoir is, "The fishermen were having a wonderful time."



OUR SOIL

A Local, State and National Problem

By DR. ROBERT H. SALTER

Chief, Soil Conservation Service

Photos courtesy SCS

THE land resources of the United States have played a continuous key role in the growth and development of our nation ever since the Pilgrims settled in America. Soil still is the most basic of our natural resources. Today, however, we are making the land contribute to national growth and stability in a different manner than we did a century ago. Today we are working toward building rather than exploiting our soils.

When settlers came to America in search of freedom, as they came to Virginia at the Jamestown settlement 345 years ago, they found a new land of opportunity. They found their new land so productive that one man could grow more than enough for himself and his family.

Everyone was not needed to grow food. Some could be spared to make tools and provide services for the rest.

As settlement moved westward, more and more people could be spared from the farms. Towns and cities sprang up. The fertile soils fed the growing industries and the country grew. But the soil's capacity to produce was taken for granted. When a farm wore out, it was abandoned and the people moved on west to settle more new land.

When we ran out of new land, we concentrated more

on exploiting the available soil resources to feed the bloodstream of our fast growing nation. Consequently, erosion set in on much land.

Erosion damaged, in varying degrees, 58 per cent of the land in the state of Virginia. Between 1900 and 1930 more than 3 million acres of Virginia farm lands were abandoned.

Public attention was focused on the problem. By the 1930's the American people as a whole realized that they had a vital stake in our soil resources. Soil conservation was recognized as a public responsibility of national scope that merited support by government at national, state, and local levels.

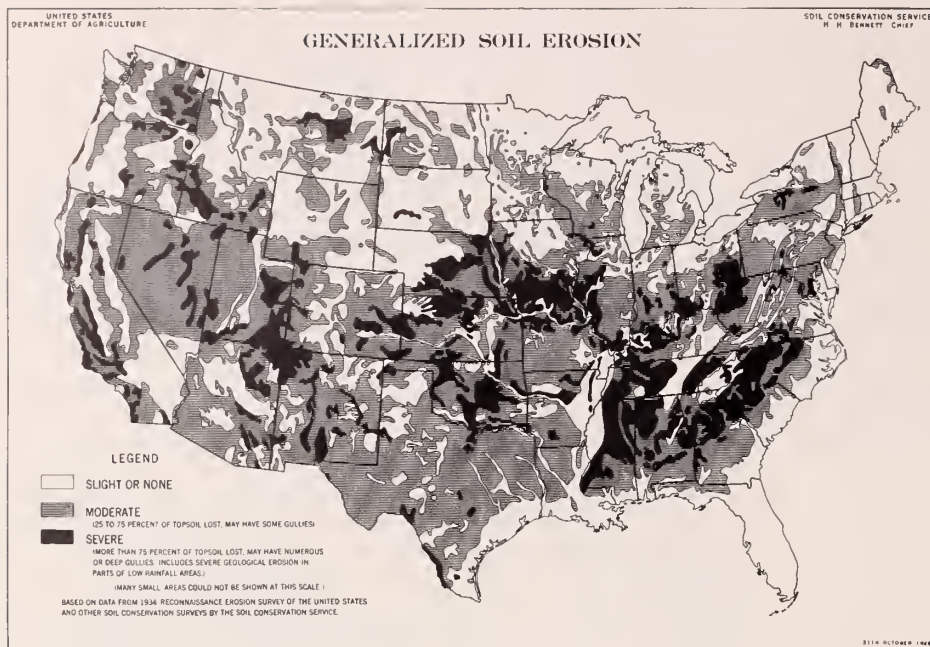
Consequently, the Congress of the United States enacted soil conservation legislation. In 1935 the Soil Conservation Service came into being.

The original objective was to overcome the tragic erosion menace to American land. Gradually, during the last twenty years the concept of soil conservation was broadened until today the objective is to use each acre of agricultural land within its capabilities and to treat it in accordance with its needs for protection *and* improvement.

The concept of soil conservation has come to mean proper land use, protecting the land against all forms of soil deterioration, rebuilding eroded soil, conserving moisture for crop use, proper agricultural drainage and irrigation where needed, building up soil fertility, and increasing crop yields and farm income—all at the same time.

It is based on the understanding that you can conserve soil without building it, but you cannot build soil without conserving it.

Modern conservation farming involves increasing soil



A generalized picture of America's depleting soils. The picture on the land would be even more startling.

productivity and increasing standards of farm living for today, tomorrow, and for posterity. It combines the objective of national welfare with better living for the people who work the land. It has come to mean efficient abundant production on a sustained basis.

Throughout this chain of events in land development in the United States American wildlife has suffered. Biologists sometimes speak of game animals and beautiful birds as "vanishing Americans."

Once North America had more wild fowl and game than any other continent. The last passenger pigeon died in 1914. The heath hen became extinct in 1933, the Labrador duck in 1875, and the great auk in 1844. The big, dark bison of the northeastern United States vanished years ago, as did the Maine giant mink, the eastern cougar, and many kinds of bears.

Now in our generation, we find that nearly 50 different remaining species are dangerously close to becoming extinct. The bighorn sheep, caribou, western bison, and many kinds of birds are almost gone. After almost vanishing, the prong-horned antelope is coming back under careful protection and management.

One of the things responsible for depletion of wildlife has been altering of the habitat through rapid development of the land for agriculture. When the settlers moved westward, they cut the forest, burned grasses, and plowed the soil. Wildlife had to find new homes or perish, and more frequently than not they perished. Many kinds of animals cannot live in areas where the natural cover has been removed. The burning of fields and brushland has destroyed millions upon millions of the smaller animals and birds. Pollution of streams has poisoned untold numbers of water birds and valuable fish. Removal of all protective cover from farm land leaves no room for wildlife.

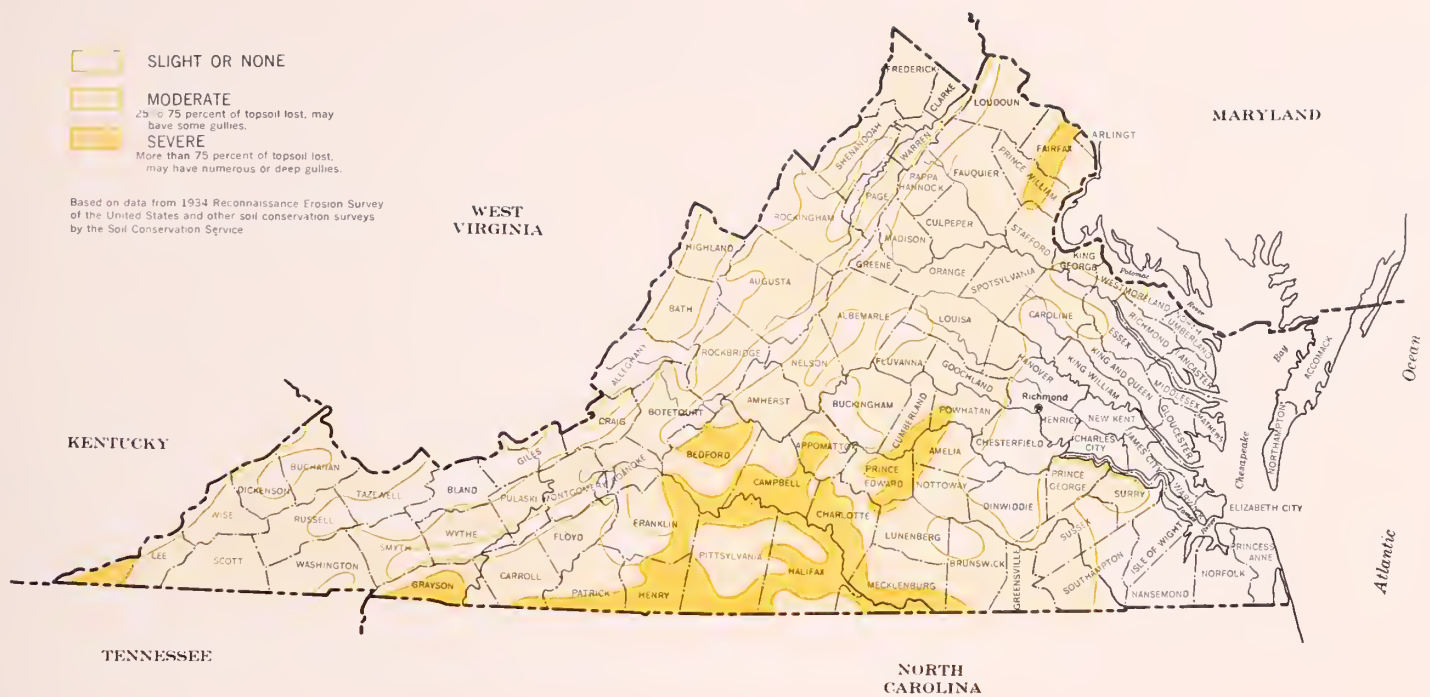
We now have a broad soil conservation program at work in all parts of the country. We have learned that erosion's toll is a needless burden—that it can be controlled and that much of the badly damaged land can

be planted to trees or grass and eventually become productive on an economic basis. We have learned also, through farmers' experiences and scientific research, that fertility level of most of our total agricultural land can be raised through use of soil-building crops, crop residues, manures, lime, fertilizers, and tillage methods adapted to soil and water conditions.

In the more than 2,400 soil conservation districts which farmers and ranchers have organized and are managing as units of state governments, conservation farming plans are being developed and applied to the land. Each is designed to adjust land uses to the soils and their capabilities, and to build up fertility and per-acre yields and protect the land from further decline. More than a million farms now are being operated according to these scientifically developed plans.

The people of Virginia can take considerable pride in the fact that 88 per cent of their state's farm land and 85 per cent of all its farms were in soil conservation districts by May of this year. Virginia's farmers already have applied the necessary conservation practices, in combinations to fit the farms, to nearly 3 million acres in farms. They have adopted contour farming on 382,000 acres of cropland, cover cropping on 390,000 acres, and stubble mulching on 390,500 acres. They are using conservation woodland management on 782,000 acres and have planted nearly 12,000 acres of new woodland to protect the soil of badly eroded areas. Also, they have seeded 145,500 acres of new pastures and "renovated" or improved nearly 850,000 acres of old pasture land.

Nor is wildlife forgotten. In the last few years nearly 22,000 acres on Virginia's farms have been planted and otherwise adapted especially for wildlife habitat and food. The 3,326 farm ponds farmers have constructed on their farms provide fish for food, waterfowl habitat, and recreation for the farm family, as well as valuable water storage in case of dry weather during the growing season.



To move forward with this job of restoring our land to its full capacity not only is the responsibility of all Americans, but it is an enormous challenge of the kind that appeals to our liberty loving people who take pride in their country, their state, and their community. It will take time and a great deal of hard work, but we know now that it can be done. In fact, since that time, nearly two decades ago, when the first surveys were made to determine the real condition of the land and the real job ahead, the hardest part of the job—finding out how to do it—has been brought fairly close to completion. And the work now shows up on the land itself, in every state.

With the support and encouragement of all the people, the program can go forward much more rapidly in the future. Of course, everyone in the country already is represented in soil conservation work, through his or her local, state, or federal agencies which are working with farmers on their farms. But this is not enough for many Americans who are interested in the welfare and strength of the nation.

What can Virginians do to help this work in their state? I shall mention two important things here:

First, a continuous and extensive educational program is needed to assure effectiveness of a conservation program on the land. All rural people must become thoroughly informed about the need for and the objectives of the work. It must extend much beyond the farm and farm family—to schools, business and civic groups, and to urban homes. Each of us must gain a proper appreciation of the problems of the land if we are to accept our rightful position in the conservation program.

Second, a continued strengthening of the soil conservation districts is of primary importance. The districts must be recognized by the entire population of the state—all states—as the farmers' organization for dealing directly with the problems of the land. Landowners must be encouraged to use the district facilities, which are many. And all citizens ought to be willing and eager to express special recognition and appreciation to farmers who are adopting conservation methods, and to supervisors of the districts who are administering the affairs of the districts and inviting and encouraging participation in this endeavor of great social and economic importance to the American public.

Will we have this or this?



The Red-Eyed Vireo

For Bird of the Month for July we nominate the red-eyed vireo.

The vireos are "sparrow-size" birds, and, like the sparrows, are usually inconspicuous in coloring. Though indeed they are more nearly related to the warblers. On the other side of the family they are closely connected with the shrikes. But I do not believe a self-respecting vireo would claim kin with a "butcher-bird."

The vireos are slow-moving, industrious little birds that go over a tree in methodical fashion, seeking out the worms and insects, especially on the leaves.

This is a truly American family, including about one hundred species and sub-species; but only about a dozen are found in the United States; only seven in Virginia.

The red-eyed vireo is the most widely distributed member of the family. It nests from middle Canada south to Texas and Florida. But its point of greatest density is the Middle Atlantic States. Here, we are told, it is the most common bird of our woods.

His nest is a little cup, set between two horizontal forking twigs or small branches. Height from the ground seems unimportant; it may be five feet; it may be fifty. It may be deep in the woods, or down by a stream, or high up in a tree on some busy street. When the leaves are gone in the fall you may see it.

But the outstanding thing about the red-eyed vireo is his vocal activities. He quarrels and scolds not unlike a wren. His main job is to sing; and sing he does. The song is made up of short phrases repeated over and over again. Someone has suggested he is saying, "You see it—you know it—do you hear me?—do you believe me?" It is claimed he repeats this as often as forty times in one minute. And remember, he warms up in warm weather, and sings all day long, nearly all summer long. Do you know what they call him? The "preacher bird."

The red-eyed vireo arrives in Virginia around the middle of April. Look for him about April 20. He leaves in late September. He winters in South America.

A Nest of Stone

By

MYRTLE J. BROLEY



A nest of petrified duck eggs

Here is an unusual story of one of nature's phenomenon, told by an indisputable lady, Mrs. Myrtle J. Broley, whose interest in nature and conservation is well known in Canada as well as the United States.

This picture of a petrified duck's nest with its six eggs and the material surrounding them turned to stone was taken in Manitoba, Canada, some time ago. At the time the farmer who had it told me he had turned it up while ploughing through land which had been part of a drying up lake.

Recently, however, a lady from Saskatchewan wrote me to say that a sailor had brought this nest with him from England and had sold it to someone for a few shillings. She said he had cut the hole in the egg in the lower left hand corner to find out if it was hollow. We cannot tell which story is true so the origin remains a puzzle.

At any rate the forms of the eggs are quite unmistakable. The nest looks like that of a Pintail and this duck often lays only six eggs whereas later nesting ducks will have larger clutches. Eggs and nesting material are alike covered with a fine calcite deposit and there are even a few petrified feathers.

CONSERVATIONGRAM

Late Wildlife News . . . At A Glance

- COMMISSION OFFERS REWARD FOR RETURN OF FISH TAGS: Fishermen lucky enough to catch a tagged fish in Virginia waters will be doubly rewarded. Not only will there be fish in the frying pan, but the Commission will pay one dollar as well for each tag returned to their offices in Richmond, as authorized by the Dingell-Johnson federal aid to fisheries investigation program. Fish have been tagged by Commission fish biologists in Claytor Lake, Back Bay, Carvin's Cove and Fairystone Lake. It is important that these tags be returned to the Commission in order that the information may be obtained on the number of fish being taken, size of the fish population, fish movements, and to determine if the fish are making proper growth.
- COMMISSION DISTRIBUTED TWO MILLION WILDLIFE FOOD PLANTS: Commission game technicians and game wardens, in close co-operation with the Soil Conservation District personnel, farmers, landowners, and sportsmen will put out more wildlife food plants and seed this year than ever before in Virginia's history, I. T. Quinn, executive director of the Commission, recently announced. Quinn stated that an approximate 2,000,000 bicolor lespedeza plants and 40,000 pounds of wildlife food mixture seed will be distributed this year.
- COMMISSION PLANS PUBLICATION OF NEW BOOK ON VIRGINIA FISH: To meet a long time need, the Commission has begun preparations for the publication of a popular but authoritative booklet on fresh water game fishes and fishing in Virginia. The publication will be of similar quality and treatment as the Commission's latest publication, "Birdlife of Virginia," and will have four color plates of game fish, including a number of drawings and photographs on fishing and fish management. Work on the four-color cover has been promised by Walter Weber, one of the nation's leading wildlife artists.
- I. W. L. A. AGAIN BACKS WILDLIFE ESSAY CONTEST: At a recent meeting of the directors of the Virginia Division of the Izaak Walton League of America, it was unanimously agreed that they would again co-sponsor the annual wildlife essay contest with the Commission of Game and Inland Fisheries. The I. W. L. A. has, for the last several years, joined with the Commission of Game and Inland Fisheries in sponsoring the wildlife essay contest. Both organizations donate \$500 each year which is used to make up the 57 money-prizes issued to contest winners.
- COMMISSION GRANTS STATE COMMUNICABLE DISEASE CENTER PERMIT TO COLLECT GAME SPECIMENS: In conjunction with a study being carried on by the State Communicable Disease Center, Norfolk, of ticks and the part they play in spotted fever and tularemia, the Commission of Game and Inland Fisheries has granted a collector's permit to Lawrence W. Saylor to collect game birds and mammals on which ticks may be found in Virginia.
- BOUNDARIES OF CLAYTOR LAKE DEFINED: I. T. Quinn, executive director of the Commission, in answer to dozens of inquiries about the boundaries of Claytor Lake in southwest Virginia, has defined them as follows: "Claytor Lake extends from the Appalachian electric power dam to the mouth of Reed Island Creek at Allisonia, Virginia."
- NEW NON-RESIDENT FISHING LICENSES BECAME EFFECTIVE JULY 1 FOR STATE IMPOUNDMENTS: By an act of the last General Assembly, a new three-day non-resident fishing license was made available to out-of-state fishermen on July 1 for fishing in interstate impoundments only. This license will be for three consecutive days and will cost one dollar.
- COMMISSION TO PUBLISH FISHING, HUNTING, TRAPPING LAWS AND REGULATIONS: The Commission of Game and Inland Fisheries is compiling for publication all laws relating to hunting, fishing, trapping, Commission regulations, and exceptions thereto, for distribution to the courts of the Commonwealth, I. T. Quinn, executive director of the Commission, reports. By Act of the recent General Assembly, which required that all laws relating to hunting, fishing, trapping, Commission regulations, and all exceptions thereto of both general and local application shall be published once a year in a pamphlet or handbook. Courts of the Commonwealth shall take due judicial notice of all laws and regulations contained in such publication.

Crashing woodland waterfalls



↑ Great vistas from mountain summits

→ Flowering hillsides



Virginia's OUT

A nation's wealth is measured
the states within her borders
heritage stands second to none
waters cloak her soil from



→ Fishing and recreational ponds



↑ Sprawling moss-coated swamps



↑ Rugged, forest-covered mountains

Commission and V.S.C.C. photos

OUR

Heritage

l by her resources, as are
aries. Virginia's outdoor
and her wildlife, woods and
st line to mountain peaks.



← Thriving wildlife menagerie

↓ and sparkling-clean unpolluted waters

Multitudes of songbirds



↑ Broad fertile valleys



The Growth of **FORESTRY** in Virginia

By **GEORGE W. DEAN**, *State Forester*

Photos courtesy Virginia Forest Service

FORESTS AND FOREST PRODUCTS have long been an important factor in Virginia's economy. The writings of the earliest colonization days remark concerning the "vast forests of oak and pine." The first efforts in Virginia, as well as elsewhere in this new country, were to clear lands for agricultural enterprise, and this clearing of necessity continued on a major scale for well over a century. But notwithstanding this fact, Virginia early assumed a position of importance in the lumber industry. Data is lacking for the earlier years, but it is noted that in 1839 the dollar value of lumber produced annually in Virginia was over half a million; that by 1849 this product value had grown to almost a million dollars per year, and that by 1859 it had exceeded an annual valuation of \$2,200,000.

Through the years marked by the end of heavy production in the Northeast and the Lake States, as the lumber industry moved west to the Pacific Coast and to the deep South, the production in Virginia grew to a peak reached in 1909 when a total of 2,101,718,000 board feet were sawed. Even though 1909 marked the peak, and incidentally, the only year production exceeded two billion board feet, no immediate slump of major proportions followed. Lumber production well over the billion mark continued for several years, but saw timber of the desired species was becoming increasingly hard to find, and leaders in the affairs of the Commonwealth began to realize that measures must be taken to protect and develop our forests

if they were to survive and continue. Perhaps the beginnings of a national interest in forestry helped this realization along, but it is probable that the pinch of shortages was the principal factor. The states in the Northeast had long felt this pinch, and most of them had long since taken some initial action. States in the deep South were still cutting heavily in their "inexhaustible" supplies of timber. Virginia was in position to see the handwriting on the wall, although as yet only faintly.

FIRST STEPS IN FORESTRY

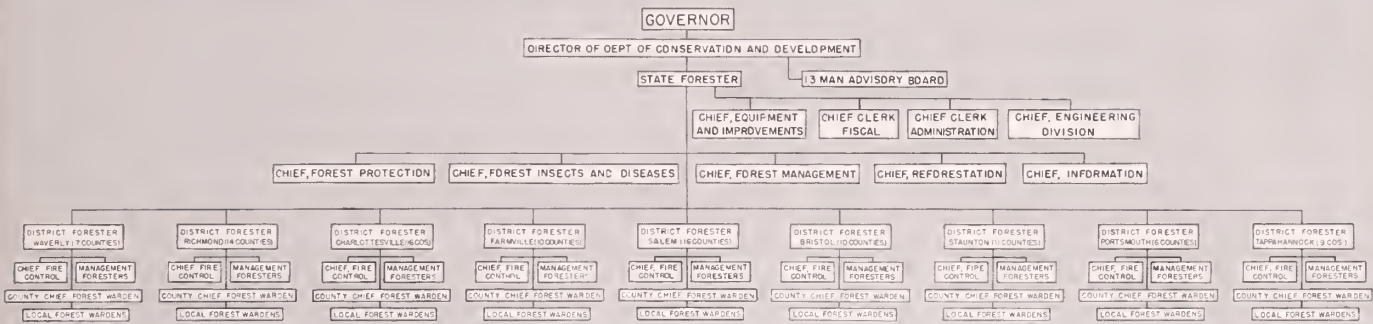
In 1914, the first General Assembly enacted legislation creating the office of State Forester under the direction and control of the State Geological Commission, specifying the qualifications, method of appointment, and bond. The Geological Commission was charged with the duty to "ascertain the best methods of reforesting cut-over and denuded lands, foresting waste lands, preventing the destruction of forests by fire, the administering forests on forestry principles, the instruction and encouragement of private owners in preserving and growing timber for commercial and manufacturing purposes, and the general conservation of forest tracts around the headwaters on the watersheds of all the water courses of the state." The duties of the State Forester were likewise defined, most of which were in the implementation of the charge to the Commission.

There were in 1914 several laws on the statute books dealing with forest fires, but most of these were along the

From his appointment in 1915 State Forester Jones recognized his first task was forest fire control. Shown here is a typical fire fighting tool depot



ORGANIZATION CHART OF THE VIRGINIA FOREST SERVICE (1952)



general line of trespass. Some of these dated back to the Code of 1904, and may have been in existence long before that. The 1914 General Assembly filled in gaps left by these old laws with new ones, providing a fairly adequate groundwork for forest fire prevention and the enforcement of necessary restrictions. Looking far into the future, a groundwork was also laid at that time for the administration of future state forests, which were then authorized.

Thus was the groundwork laid. It was a good foundation and upon it was built the Virginia Forest Service of today, with no major policy changed. We shall trace the growth and development of that agency by its major functions, since the outstanding landmarks vary for each of the divisions.

From his appointment in 1915, State Forester Jones recognized that his first task was forest fire control. The earliest effort toward that end was a fire prevention campaign implemented by a series of five forest fire prevention posters. Distribution was largely accomplished by forestry-minded volunteers. These were followed by suitable press releases, and late in the year a limited co-operative allotment under the federal *Weeks Law* made possible additional poster material and the beginning of actual fire control work in the field. Such allotments were for the protection of the headwaters of navigable streams.

In 1915 the original blueprint of the warden system was also worked out on a county unit, with county participation. This plan called for a chief forest warden with a force of local wardens augmented by volunteers in actual fire suppression, and as such it served well. Under this plan the counties of Norfolk, Chesterfield and Appomattox—pioneers in forest fire control—agreed late in 1915 to begin the plan January 1, 1916.

The first outstanding landmark was in 1926, when the General Assembly so amended the basic legislation as to pave the way for regularly organized crews of paid fire fighters. While the enacted legislation was perfect in principle, appropriations were inadequate for state-wide protection, even on a minimum basis. But 53 of the 100 counties of the state could be protected, and it became necessary to place the new provisions for paid fire crews on a voluntary basis with the counties. An intensive "selling" campaign began, and by the mid-thirties paid suppression crews were the rule rather than the exception.

The drought of 1930 brought the first serious test of the growing fire control organization in Virginia. The average

precipitation for the entire year was but 24.14 inches, 57.2 per cent of normal. The fire season was practically year-long, and many forest fires had to be fought in July and August, with temperatures hovering around the hundred mark. Within the organized territory, 2,869 fires occurred, burning 391,604 acres, or 4.68 per cent of the area protected. While this result measured by 1952 standards would be unimpressive, if not disastrous, it was more than creditable by 1930 standards and under the set of circumstances existing at the time.

C. C. C. MOVEMENT AND NATIONAL DEFENSE

The creation of the C. C. C. in 1933 and the extension of this movement to state agencies stepped the physical improvement program ahead by many years. By the end of the C. C. C. program Virginia not only had a complete tower system with adequate communication covering the then-organized territory, but it also had a rather elaborate network of forest fire roads and trails to expedite the movement of fire fighters into previously inaccessible areas.

Aside from the physical improvements, however, the C. C. C. accomplished another outstanding achievement. It awakened anew public interest in forestry and in the latent value of the timber resources. The end of C. C. C. came with the national defense program. With the end of the war in 1945 the recognized increased value of the timber resources had resulted in additional funds, both state and federal, which made possible the continuation of state-wide protection of Virginia's forests.

The protection from forest fires available today is somewhat less than adequate for another emergency such as 1930, but it is effective under conditions usually to be expected. In the period from 1946 to 1950, inclusive, for the average year the area burned has represented only 0.14 per cent of the area protected. This figure compares most favorably with the records of the other states along the eastern coast, and the greatest hazard to timber growing has been brought under a reasonable control.

The encouragement of reforestation, along with the necessary operation of a nursery to supply the planting stock, was implied in the enabling legislation and included in the original plan of operation. The first nursery was established early in 1916 on the grounds of the University of Virginia near the intersection of Routes 29 and 250. Production of seedling trees for forest planting has continued uninterruptedly since that time.



Little rain and dry winds make Virginia forests susceptible to fire. Breaking matches and crushing cigarettes are good rules to abide by in woodlands

In 1927-28, plans of the University made necessary the removal of this nursery to a new site which is now occupied by Scott Stadium. After only about two years, during which the annual production had grown to almost 450,000 trees, it was again necessary to move, this time to the present Charlottesville nursery site on Route 29, about one mile south of town. Here the nursery continued to expand with the demand until the capacity of the site was reached, late in the days of C. C. C. With the attention which had been directed toward conservation and forestry by the C. C. C. movement, it was impossible to keep up with demand and the nursery was literally "bursting its seams." Peak production in 1941 was 2,281,158 seedlings.

The shortage of man-power during the war gave some respite, but an additional nursery became a necessity with the return of peace. In 1947 a new nursery was established at Camp Peary, near Williamsburg. This property is now being vacated and the nursery is being moved to a newly acquired site in New Kent County near Windsor Shades.

Production by 1951 had grown to about 4,250,000 seedlings. The current 1951-52 planting season is expected to see some 7,000,000 seedlings planted. The new nursery is susceptible to expansion to any extent likely to be necessary to supply any demand probable in the foreseeable future.

FOREST MANAGEMENT

Another of the original objectives was, to quote the original law, "... the administering of forests on forestry principles," and, "the ... encouragement of private owners in preserving and growing timber for commercial and manufacturing purposes" This was recognized from 1915, but for many years it was necessary to limit this work to such general advice as could be offered land-owners by the professional personnel of the compact little organization in the early days.

Late in 1942 it became possible to organize three "marketing assistance" projects with federal co-operation, and to employ for each a technically trained forester to advise

owners with forestry problems, mark and estimate the trees which should be removed from growing or mature stands, and help channel the products into proper war uses. With the end of the war, the work was well established and the first two of the above duties developed rapidly. The General Assembly of 1946 enacted the *Timberland Assistance Act* which authorized this expansion and suitable fees for timber marking. The demand has continued to grow and in 1952 there are 36 foresters giving their time to this type of work.

Since 1940, a law has been on Virginia's statute books requiring that four seed trees of loblolly or shortleaf pine shall be left upon each acre of timber cut, where these species occur. This law is designed to retain a source of desirable pine seed and to protect Virginia's supply of pine, the raw material upon which so much of her industry depends.

Although "forest reserves" of state forests were contemplated in the legislation of 1914, no funds have ever been directly appropriated for their purchase or operation. Virginia's first state forest, the Gallion, located in Prince Edward County, was acquired under the will of the late Emmett G. Gallion who died in 1919. This tract, amounting to some 588 acres, was the nucleus of the state forest system, and was, in fact, the only state forest for almost twenty years.

In 1938 a gift of 400 acres of land in Prince William County was received from the Conway Robinson Memorial Association, which was constituted as the Conway Robinson Memorial State Forest.

In 1939 a lease of 99 years' duration was made with the United States Government covering certain lands purchased in the Piedmont Region by the Resettlement Administrations during the years since 1934. These lands, in three units, embraced about 39,500 acres, and in accordance with the terms of the lease are organized as the Cumberland State Forest, the Appomattox-Buckingham State Forest, and the Prince Edward State Forest.

The acquisition through lease of these forests at last provided state forests on a workable basis. They are managed for forest production, wildlife, and for recreation. In the field of wildlife, the Commission of Game and Inland Fisheries co-operates with Virginia Forest Service providing field sport especially for the people of the neighboring counties. Recreation at the lakes is administered by the Division of Parks

In 1946, the Department of Conservation and Development acquired title to a 7,600-acre property in Chesterfield County from the United States Government. Approximately 2,000 acres of this is administered as a park, and 5,600 acres as the Pocahontas State Forest.

It is perhaps interesting to note in conclusion that these forests, as a group, are entirely self-supporting, so far as the forest administration as such is concerned. Twenty-five per cent of all money arising from these funds is returned to the county in lieu of taxes. All are under such management as is practical and are producing forests. Receipts from timber harvested maintains them and profits are reinvested in improvements. And, best of all, the timber inventories are steadily increasing, for the timber cut annually is less than the timber growth.



Photo courtesy Montague Gammon

In years gone by this was an average day's bag. Public indignation demanded regulatory measures

GAME THIEVERY CAN BE BROKEN

By CECIL E. WRIGHT, *Trial Justice*

Trial Justice Court of Craig County

THIEVERY can be defined as an act or practice of stealing or taking away something that belongs to someone else. Under the laws of the United States the game resources in this country rightfully belong to the people. This was made very clear in the Supreme Court case *Geer vs. Connecticut*, 519-544, in which the highest court body in the United States handed down a very important decision on the ownership of game. This was back in 1896 and is shown in U. S. Supreme Court Reports 159-162, Book 40, pages 793-802. The two most significant paragraphs in this decision can be quoted as follows:

"In error to the Supreme Court of Errors of the State of Connecticut to review a judgment of that court affirming the judgment of the Criminal Court of Common Pleas convicting Edgar M. Geer of unlawfully receiving and having in his possession with intent to transport beyond the state certain woodcock, grouse, and quail killed within the state, and imposing a fine upon him."

"Whilst the fundamental principles upon which the common property in game rests have undergone no change, the development of free institutions has led to the recognition of the fact that the power or control lodged in the state, resulting from this common ownership, is to be exercised like all other powers of government as a trust for the benefit of the people, and not as a prerogative for the advantage of the government as distinct from the people, or for the benefit of private individuals as distinguished from the public good. Therefore, for the purpose of exercising this power, the state, as held by this court in *Martin vs. Waddell*, 41 U. S. 16 Pet. 410 (10:1012), represents its people, and the ownership is that of the people in their united sovereignty."

In our dealings with the problem of game violations and crime, in general, one important factor which is almost completely forgotten is the good citizen or the supposedly good citizen who traffics with the violator and criminal

and thereby abets crime.

The amount of thievery which goes on in well governed cities is shocking. But the amount of stolen goods that finally gets into the hands of people who did not steal them is most disheartening.

Gambling is generally considered to be an evil which undermines good government and law enforcement. In one great metropolis after another the police force has been corrupted by those who have wanted to make the huge



Commission staff photo

Constant vigilance on the part of these wardens, after these illegal fish traps were reported, brought the violators to trial and conviction

profits which go with organized gambling. But there is not a gambling ring in the United States which could stay in business a fortnight without the traffic that comes from those who like to call themselves "good citizens." Likewise, game violations could be reduced to a minimum, if not stamped out altogether, if those who like to call themselves "good citizens" or "good sportsmen" would report all violations and willingly and honestly testify against the violators.

If the hunter and fisherman would report all violations and testify against the violator, the efforts of the Commission of Game and Inland Fisheries in the propagation of game and fish would not be sabotaged by the deliberate violator and sneak hunter and fisherman.

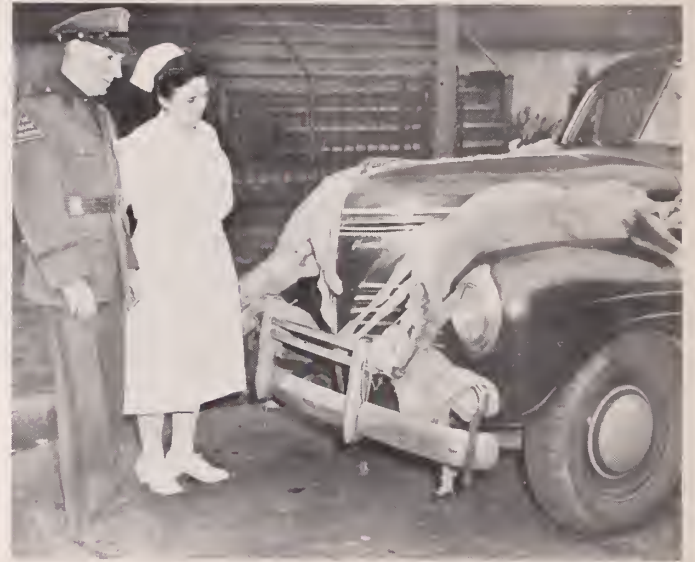
Too many people are more anxious and more interested in getting laws made than they are in seeing that laws are observed and enforced. Making laws is one of the simplest tasks to which a modern government addresses itself. If the millennium could be brought in by just laws, ably written, it would have arrived hundreds of years ago. But writing laws does not change the character of the public.

The success of any law depends upon the fidelity with which it is enforced. Criminologists in large numbers are agreed that it is not the severity of punishment that deters men and women from committing crimes but the certainty of punishment.

The game wardens cannot successfully enforce the game and fish laws unless the public will co-operate in that they themselves will observe the laws and report all violations. To that end, we should appeal to the general public for their co-operation in protecting and preserving game and

fish by honestly observing all laws and reporting all violations.

It is hard to make a private citizen see why he should report game violations when he sees one taking place. Yet, this same person would quickly report a robbery. Perhaps if Mr. Citizen could be made to realize that game thievery is a crime against the entire public, instead of a game of cat and mouse with the game warden, he would change his attitude toward the game thief.



Commission staff photo

Two illegally killed deer are turned over to a charitable institution. Scores of such animals are left to rot in the woods by game thieves every year

Any citizen who demands that a law be passed or enforced protecting him in his rights, or his property, must assume the responsibility for obeying that same law when the rights and property of others are involved. In all too many instances it has been true that lawmakers and law enforcement officers have become lawbreakers and greater anarchy would be difficult to imagine.

I hope we can do something to encourage the citizens of every walk of life to see the absolute necessity for the protection and preservation of game and fish. I hope that through members of the courts, game wardens, members of the Commission of Game and Inland Fisheries, hunting clubs, fishing clubs, wildlife organizations and the VIRGINIA WILDLIFE magazine we can adopt and bring to the majority of the people a theme with special emphasis on protection and preservation of game and fish. I feel like an addition to the Conservation Pledge for 1952 would be fine. That is, that through the above stated clubs and organizations we will seek to get as many people as possible to make the following pledge:

"I give my pledge as a Virginian and an American to save and faithfully to defend from waste the natural resources of my county, my state, and my country—their soils and minerals, their forests, waters, fish and wild animals and birds. I further pledge to faithfully observe all hunting, fishing and forest laws and to report all violations that come to my attention."

New method discovered for Tick and Chigger Control

OUTDOOR PERSONNEL can now be protected from ticks and chiggers, which are not only irritating but are known carriers of Rocky Mountain spotted fever (tick fever) and rabbit fever. Tick and chigger repellent lotions on the market today were developed to apply on the exposed parts of the body such as hands, face, neck, and ankles. Now, a low pressure bomb has been developed to impregnate the outer clothing to give over-all protection to outdoor people.

In 1945, The Allison Lumber Company of Bellamy, Alabama, was struggling to meet its quota of wood products produced for the Armed Forces and was seriously hampered in its efforts because of heavy tick infestation in their forest. Many widely publicized insecticides were tried, but a safe and effective repellent could not be found. The Whitmire Research Laboratories of St. Louis, known for its research in controlling these pests in other fields, was called in to help solve the problem. Dr. H. E. Whitmire, research director of The Whitmire Research Laboratories, Dr. D. C. Byrnes, medical director of The Allison Lumber Company, and Dr. L. L. English, entomologist of the Alabama Polytechnic Institute, combined their respective skills in a joint effort to solve the problem.

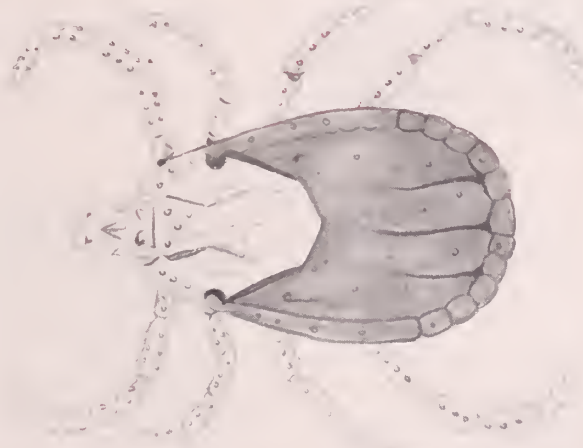
In field tests, these researchers soon discovered that application of repellents to the exposed parts of the body was not sufficient for protection. These ticks and chiggers, which climb high grass, bushes and trees, would attach themselves to outer clothing when in contact with underbrush, trees, or high grass. From these places, they would work their way through the clothing fabrics and attach to the body. The Whitmire Laboratories then worked out a Hydrogenated Rotenone repellent to im-

pregnate the outer clothing to keep these ticks away, and the problem was solved.

Woodsmen of Allison Lumber Company, comprising 60 men along with the administrative staff, gathered for an experimental field test. Some were treated only on small exposed parts of some men for patch tests; clothing and exposed parts on others were sprayed completely, and a few given no treatment. These men were all sent into heavy tick and chigger-infested forests for several hours. Each man was carefully checked on return. Those men treated on clothing and skin were entirely free of pests.

Those given only patch treatments on select parts of the body were protected only on those spots, but ticks were attached to untreated parts. If the repellent had been applied only between the ankle and the knee, a higher percentage of ticks and chiggers went into the shoes or above the knees. However, the untreated men returned with heavy infestation. Some had up to 500 tick bites and imbedded ticks on their bodies.

The Whitmire Laboratories produced this repellent under the trade name "Ticks-Off" and supplied it to lumber companies throughout the Southern States. By 1949, thousands of outdoor workmen were using "Ticks-Off" if their livelihood depended on working in areas where heavy infestations of chiggers and ticks were found. In 1950, the demand became so great for "Ticks-Off" in fields other than forestry that it was placed in a low pressure bomb and offered for sale in select locations during 1951. Now dozens of Government and State Departments consider "Ticks-Off" a "must" in their work. This year it is being made available throughout the South, Southeast, and West. One 8-second treatment gives a full day's protection with a cost per treatment of approximately 3 cents.





Virginia's Furbearer Series

THE RACCOON

(*Procyon lotor*)

RACCOONS ARE SO well known to the average Virginian that almost any school kid could readily describe or sketch them. Yet, because they are nighttime marauders, they are rarely seen in their native habitat. What, then, accounts for this unusual familiarity? No doubt, much of it comes from the history books which tell so much and describe so eloquently the "coon" skin hats of the early pioneers. Add to this the great number of raccoons seen in zoos, parks, and pictures and we find that "Old Mr. Bandit" is quite a well known guy.

The raccoon is found throughout the entire Commonwealth, but is most common in Tidewater Virginia. This animal at one time was all but wiped out of the western mountains, but a strenuous Commission program of live trapping in areas of abundance and releasing in areas of scarcity have brought it back to normalcy in practically all of its original habitat.

Mating takes place in January or February and the kits are born in April or May. By late summer the young coons are capable of caring for themselves and feed alone, but a majority of the family group remains in the vicinity of its birthplace.

Young coons grow rapidly and by the second year they are difficult to distinguish from their parents. Perhaps the average weight of a full grown coon will be in the vicinity of 15 pounds, but tall tales are told of some weighing as as much as 40 or more pounds.

The raccoon belongs to the flesh eaters and its nearest relative is the bear. Like the bear, its diet is varied and usually consists of anything edible which it happens upon. It delights in hunting crawfish, snails, fish, aquatic insects and almost anything else that moves. Mice and birds are sometimes taken. Corn, berries and fruit are consumed in season.

The fur value of the raccoon taken in Virginia has varied from practically nothing to six dollars a skin in the last 25 years. The fur is heavy, rather coarse and grizzled colored and the hide is thick, making the tanned skin suited to but a few uses such as heavy coats and trimmings.

It is conceded that the value of the raccoon as a sporting animal far exceeds its value as a furbearer. It has been protected from trapping in Virginia for the past 17 years. It may be taken legally only with dogs and may not be trapped except in areas where it is doing damage to farm crops. Even in areas where it is destructive it is necessary to obtain a permit from the local game warden before the destructive animals may be trapped. Under this protection, it has increased remarkably in certain sections, especially in the muskrat marshes of Tidewater Virginia.

The Commission, through a rather extensive program of live trapping and releasing, has made it possible for the coon hunter to enjoy his sport everywhere in the Old Dominion.

Virginia's Game Bird Series

THE GREATER SNOW GOOSE

(*Chen hyperborea atlantica*)

VIRGINIA IS FORTUNATE in having one of the three main wintering grounds of the greater snow goose. Being a bird exclusively of the Atlantic coast, the great snow winters off the coast of Maryland, Virginia, and North Carolina.

Its specific name, "hyperborea," was well chosen, for it means "from beyond the north wind," and this phrase pretty well describes its breeding grounds far to the north. It has never been found nesting on the mainland of North America, but rather it chooses the northern part of the Arctic Archipelago of Canada and in northern Greenland.

The wintering grounds of the snow geese in Virginia are in the vicinity of Back Bay and Eastern Shore. This bird is a large white goose with black wing tips and remains with us nearly as long as the Canada goose. It is two-thirds the size of the Canada, but its general white appearance and black wing tips make it easy to identify both on the water and in flight.

The lower St. Lawrence River is visited by the entire population of greater snows during the spring and autumn migrations. The number counted in this area increased from about 3,000 to 10,000 in thirty-five years. In 1940 Dr. H. F. Lewis reported a flock of 18,000 greater snow geese at St. Joachim. Today, more thousands bespeckle Atlantic Coastal waters.

The first eggs of the snow are laid soon after July 1. A full clutch usually has from six to seven eggs. They hatch in about four weeks. The young remain with the



mother on the inland lakes until they can swim, dive, and walk fairly well, and then they take to the open sea.

The great snow goose feeds early in the morning or late in the afternoon, and also on bright moonlight nights. They drive their bills into the sand at the base of the grass or sedge and pull it out by the roots, and in this manner they devegetate an area in but a short time.

In this respect these geese are much like the white-tailed deer. They too, on occasion, devegetate their range of food plants, but rarely completely denude an area of plants.

Perhaps the most ironic thing about nature is that despite the fact that wildlife habitat is steadily decreasing she should allow her own kin to worsen the situation. Yet, that she does. Some areas have become completely devoid of vegetation and soon become coastal deserts just from the feeding habits of the snow goose. An area of approximately 300 acres on Pea Island, North Carolina, was denuded by them. Years must elapse before these bare flats will again be clothed with grasses enough that they can be used. What then is the answer? Part of it lies in food plantings. This is the easier part of the problem. The other, but tougher, part is the stopping of waterfowl habitat destruction by man. This includes stopping marsh drainage and burning. These two destructive measures probably account for declining waterfowl populations more than all the shotguns fired in past years.



SPEEDING CARS ROB HUNTING PUBLIC

Herm Tuttle, game technician from Boulevard, New Kent County, reports that speeding automobiles are killing a terrific amount of game from nature's larder.

Tuttle reports that while driving from Diascond Bridge, the east boundary of New Kent County, to Bottom's Bridge, the west boundary, a total of 20 miles, he counted 2 raccoons, 4 opossums, 4 rabbits, 1 quail, and 4 songbirds killed on the westbound lane of Route 60 at 8:00 a.m., May 6.

Considering that these animals are cleared from the main highways each day, 15 animals were killed on one 20-mile westbound lane of traffic in a 24-hour period.

OPENING DAY CREEL CENSUS ON TROUT STREAMS SHOWS BIG TAKE

A creel census taken on two of the state's trout streams on opening day revealed that despite high waters fishermen took a heavy toll of the stocked trout placed in the streams before the season opened.

Jim Engle, game technician from Staunton, reports that the anglers took 1,118 of the 1,500 brook trout placed in Ramsey's Draft and 230 of the 1,500 rainbows.

Lem Richards, game technician from Keezletown, reports that 2,800 trout were stocked in Cub Run and Pitt Spring, of which 1,800 were brook and 1,000 were rainbows. Fishermen took out 538 of the brook trout and 438 of the rainbows the first day of the season.

Of the 290 fishermen on Cub Run opening day, 35 caught their limit of 8 trout, whereas, 66 of them went home without any. It seemed that "Mr. Worm" had his day on Ramsey's Draft, for Engle reports that of the 277

fishermen 99.9 per cent of them used worms, while the remaining 0.1 per cent used flies, minnows, and flatfish as lures.

GOOD CATCHES OVERSHADOW TANGLED LINES ON SILVER LAKE

You could hardly see the water for the fishermen on Silver Lake last May 1, the opening day of the trout season in Virginia.

W. W. Wharton, Harrisonburg attorney, submits the picture showing the long train of fishermen's boats on Silver Lake in Rockingham County on



Photo by Frank Taliaferro

Silver Lake on opening day of the trout season

the opening day, just a few minutes after the 12:00 whistle blew.

Wharton related that all types of tackle were used from salt water rigs to binder twine on pool cues, and, "I can vouch for the fact that one person was actually fishing with flies," Wharton said. Practically everyone got his limit and went home happy, forgetting the tangled lines and other irritations of the day.

VIRGINIA-TENNESSEE GAME COMMISSIONS CONFER ON HOLSTON IMPOUNDMENT

Game and Fish Commission personnel from Virginia and Tennessee held a conference on May 1 at Bristol, re-

garding the interstate impoundment on the Holston River which lies both in Virginia and Tennessee.

The interstate impoundment will extend from the New Aven Bridge in Virginia to the bridge on U. S. Highway 461 in Tennessee, dividing the impoundment so that one-half will lie in Virginia and one-half in Tennessee.

A valid Virginia fishing license will be recognized on the Tennessee side of the impoundment and a valid Tennessee fishing license will be recognized on the Virginia side.

Those attending the conference from Virginia were Beverley W. Stras, Jr., chairman of the Commission. I. T. Quinn, executive director of the Commission, and G. W. Buller, fish division chief.

Attending from Tennessee were John D. Findlay, executive director of the Tennessee Commission; Dr. Gentry, biologist, and James F. Asbury, a member of the Tennessee Commission.

Another agreement by the conferees was that the Virginia Commission will reduce its daily creel limit on white bass and crappie from 25 to 20 to conform with the Tennessee regulations, and that the Tennessee Commission will reduce its daily creel limit on black bass from 10 to 8 to conform with the Virginia regulations. These creel limits apply only to the Holston interstate impounded waters.

COMMISSIONER HERRING SUFFERS BACK INJURY

Distressing news came to the Game Commission last month that their Commissioner from Dayton, T. G. (Uncle Tom) Herring, had suffered a serious back injury resulting from a fall. Latest reports, however, disclose that he is doing nicely, but must wear a body cast for some time.



EIGHTEENTH NORTH AMERICAN WILDLIFE CONFERENCE TO MEET IN WASHINGTON

The 18th North American Wildlife Conference will convene in the nation's capital on March 9, 10, and 11, 1953, it was announced by the Wildlife Management Institute which sponsors this international conservation gathering each year. All meetings next year will be held in Washington's Statler Hotel.

The North American Wildlife Conference is the largest international meeting of its kind on the continent devoted to the improved management, conservation, and restoration of renewable natural resources. It is held each year in one of the major American cities and is attended by conservationists and natural resources administrators from all parts of North America.

OHIO PARASITIC LAMPREY FOUND IN CLINCH RIVER

Dean Rosebery, assistant chief of the Commission's fish division, reports that the lamprey eel found attached to a sucker last March in the Clinch River has been identified by Ernest A. Lachner, associate curator of fishes at the Smithsonian Institution, as the Ohio lamprey.

Lachner related that this lamprey ranges from the lower reaches of the Ohio River eastward through Ohio and in the upper Allegheny River of Pennsylvania and New York and into the headwaters of the Tennessee River. He went on to say that the Institution would like to have hundreds more of these lampreys from the upper Tennessee River or wherever they can be obtained.

Lachner also related that he is interested in the non-parasitic lampreys, and that they can easily be found in the springtime, usually several in a group attached to rocks or over gravel at the crest of a riffle.

IN WILDLIFE CONSERVATION POWHATAN STEPS FORWARD

Realizing the pressing need for the conservation of our wildlife resources, the Powhatan County Board of Supervisors appropriated funds to purchase a tractor and bush and bog disc for the sole purpose of aiding landowners to make food and cover plantings for wildlife.

The board, made up of Wyatt Sanders, Martin Michaux, and Sam Bonifant, was encouraged to take this action by conservation officer C. P. Montgomery, E. P. Yates, former representative of the House of Delegates, and others interested in wildlife con-



Photo by L. G. Kesteloo

The bush and bog disc and tractor purchased by Powhatan County to make wildlife plantings. (Left to right) Herm Tuttle, game technician; Micky Morris, warden; I. T. Quinn, Commission executive director; R. Yates, of Yates Tractor Company; and C. P. Montgomery, conservation officer

servation. The Board of Supervisors will co-operate with the Commission of Game and Inland Fisheries, which will furnish the planting materials for the wildlife plantings, and they will give instructions and general advice on the project.

This action by the Powhatan County Board of Supervisors not only represents a step forward in actual wildlife conservation, but likewise shows the development in thinking and the consciousness of Virginians to the

problems of wildlife and the place it holds in the economy of any wise land-use program.

CALIFORNIA SEEKS CONSERVATION SPECIALISTS

The California Department of Fish and Game is seeking five high-calibre men in the conservation field to take charge of five regions created under the Department's new operational setup. Each appointee will have charge of fish and game operations in an area of about 30,000 square miles. Each will serve under Seth Gordon, veteran wildlife and conservation administrator and director of California's recently reorganized fish and game program.

Under the new system there will be a high degree of autonomy in each of the five regions covering the nation's second largest state. Each regional fish and game manager will deal with sportsmen's organizations and local problems directly, replacing a previous system under which such matters were cleared through various staff officers at headquarters.

Regional managers will be selected through an examination open to all qualified American citizens and conducted by the California State Personnel Board.

ANDREW LEWIS FFA CHAPTER WINS TOP RECOGNITION

The Andrew Lewis Chapter of the Future Farmers of America, Roanoke County, won top honors for the wildlife conservation work they have done this past year. They topped 212 FFA chapters that had entered the contest in Virginia.

Other chapters receiving recognition were Louisa, Louisa County, Riner, Montgomery County, and Spotswood, Augusta County. Cash prizes in the contest were as follows: First prize, \$50; second, \$40; third, \$30; and fourth prize, \$25.

Wildlife Questions and Answers

Ques.: What are the boundaries of Claytor Lake?

Ans.: "Claytor Lake extends from the Appalachian electric power dam to the mouth of Reed Island Creek at Allisonia, Virginia."

Ques.: Is it lawful for owners of a pond and the surrounding land to fish in the pond without a license?

Ans.: Yes. A license shall not be required of landowners, their husbands or wives, and their children, resident or non-resident, to hunt, trap and fish within the boundaries of their own lands and inland waters.

Ques.: Is it lawful for members who hold interest in two different ponds to take game fish by seine from one pond and put them in the other? Also, would these members who have leased these two ponds be required to have a fishing license for fishing in either one of them?

Ans.: The owner, or lessee, of any private pond stocked by himself, or by the Commission not less than three years prior thereto, may capture any fish therefrom for his own use at any time. Licenses, however, are required of clubs, associations or preserves before they can legally fish in the pond.

Ques.: Who is entitled to a resident fishing or hunting license in Virginia?

Ans.: The following persons are entitled to a resident license: a bona fide resident who resided in the county six (6) months prior to the date of application for license; any person who is a member of the armed forces of the United States who is regularly located or stationed in the state; any bona fide student regularly enrolled in any preparatory school, college, or university located in the state who presents a certificate of enrollment; any person legally qualified to vote in the state. All other persons are required to have non-resident licenses.

Ques.: When will Bugg's Island Reservoir be stocked with fish?

Ans.: It will not be necessary to stock any game fish in this reservoir since surveys have indicated that there is an ample supply of all game fish in the rivers to serve as brood stock. Any amount of stocking by man can be considered as insignificant compared with the tremendous production of a new reservoir such as the Bugg's Island project.

Ques.: Are there any changes or exceptions to the general hunting, fishing, and trapping regulations?

Ans.: There are local exceptions to the general hunting, fishing, and trapping regulations. This information may be obtained from the game warden in your county or from the office of the Commission of Game and Inland Fisheries, Richmond.

Ques.: How is it determined which streams shall be stocked with trout from the Commission's hatcheries?

Ans.: Fish emanating from the Virginia Commission's hatcheries are stocked in all suitable trout streams in the mountains which are open to public fishing. No fish are

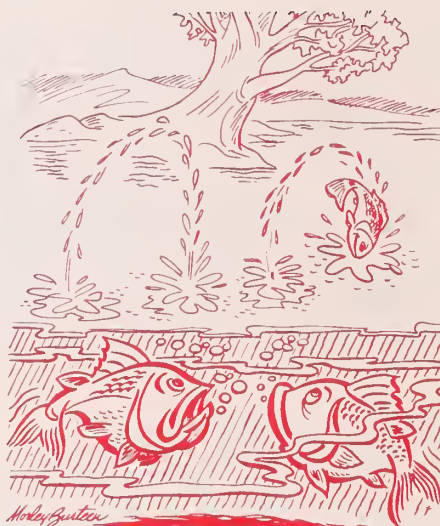
placed in any stream which is posted or closed to the public, nor are they placed within one-half mile of such waters.

Ques.: Why was Back Bay opened to year-round bass fishing?

Ans.: The waters of Back Bay are freely joined with those of Currituck Sound, located in North Carolina, and the bass migrate freely back and forth from waters in Virginia to waters in North Carolina. North Carolina has no closed season on bass, and it was therefore decided by the Commission that Virginia fishermen were equally entitled to year-round bass fishing in these waters.

Ques.: What is the purpose of tagging fish, and how does the Commission get fishermen to return the tags?

Ans.: The purpose of tagging fish is fourfold: to obtain information on the number of fish being caught, size of the fish populations, fish movements, and to determine if the fish are making proper growth. The Commission relies wholeheartedly upon the fishermen to return these tags. Without their co-operation the entire tagging program would be a complete failure. But as an added incentive to the fishermen lucky enough to catch a tagged fish the Commission will pay one dollar for each tag returned



"He just has the wanderlust, I guess"

to their office in Richmond, as authorized by the Dingell-Johnson federal aid to fisheries investigation program.

Ques.: How many wild turkeys were killed in Virginia during the 1951-52 season, and what county led with the greatest number of kills?

Ans.: There were 2,129 turkeys killed in Virginia during the past season, with Buckingham County out in front with 143.

Ques.: How many cases of rabies were reported in Virginia during 1951, and what areas were hardest hit?

Ans.: During 1951 Virginia had its highest incidence of rabies since 1944, with a total of 223 cases of animal rabies reported.

Sections hardest hit during the year 1951 were Fauquier and Loudoun counties in northern Virginia; Lee, Washington and Wythe counties in southern Virginia; and the City of Richmond. Many cases of rabid foxes were reported but the figures listed are only those definitely proven rabid by the State Health Department.

Ques.: How many hunting accidents were there during the 1951-52 season in Virginia?

Ans.: There were 28, 13 of which were fatal and 15 of which were non-fatal. Of the 13 fatalities, 7 were self-inflicted, 4 were killed by others, and 2 drowned.

Ques.: Were there more deer killed east of the Blue Ridge during the 1951-52 season than in the west, and which county led in each section in number of kills reported?

Ans.: Yes, there were more deer kills east of the Blue Ridge. Of the 7,514 deer kills in the entire state, 4,089 were killed east of the Blue Ridge and 3,425 were killed in the west. Sussex County led in the east with 650, whereas Augusta County led in the west with 541.

Ques.: What additional special stamps or permits are required to hunt or fish for particular species of game or fish in Virginia?

Ans.: Additional special stamps are required as follows: A stamp to hunt and fish on national forest lands. A stamp to hunt deer and bear. Deer damage stamp in certain counties. A federal migratory bird hunting stamp (obtainable at the post office only). And a permit to hunt or trap on state forest lands.

Ques.: Are there any public hunting and fishing areas in the state?

Ans.: The national forest areas are open to public fishing and hunting. Contact the forest supervisor, Harrisonburg, Virginia, for information regarding the George Washington National Forest, and the forest supervisor at Roanoke, Virginia, for information regarding the Jefferson National Forest. State parks and state ponds are open to public fishing under special regulations. Shenandoah National Park and Blue Ridge Parkway are open to public fishing only, under special regulations. (See current law digest of these special regulations.) Information on hunting and fishing conditions, lodging or places of accommodation or guide service is not available at the office of the Commission. Contact the county game warden or other local authorities for this information.

Ques.: Is the landowner's permission necessary before I can hunt, fish, or trap on his land?

Ans.: All lands in Virginia, except national forest lands, are privately owned and permission of the landowner must be had in writing if the land is posted; otherwise, oral permission is necessary prior to fishing, hunting, or trapping.

Ques.: I am not a resident of Virginia, but desire to do some fishing this summer in that state. How much will it cost for a non-resident fishing license?

Ans.: A non-resident fishing license will cost \$10.00. However, if you desire to fish only in impounded waters of the state you may obtain a three-day, non-resident fishing license for only one dollar. This license is good only in impounded waters.

I. T. Quinn, Commission executive director, addresses winners before introducing Governor Battle at the Capitol Building



The Governor with the winners. (Left to right) Coro Miller, Fishersville; Linda Hartmon, Roonoke; Pattie Jones, Partsmouth; Helen Benesek, Disputonto; Governor Battle, Paul Moseley, Lawrenceville; Janet Patterson, Fairfax; Jeff Fleming, Grundy; and Jackie Morris, Portsmouth

GRAND PRIZE WINNERS IN FIFTH WILDLIFE ESSAY CONTEST HONORED

Climaxing the events in the Commission-Izaak Walton League sponsored Fifth Wildlife Essay Contest, the top eight of the 56 prize winners were brought to Richmond as guests of the sponsors.

Governor John Battle personally presented the \$50 awards to each of the eight winners in the Capitol Building on May 16.

Forty-eight other cash awards were made at the same time in schools throughout the Commonwealth. Two hundred forty certificates of merit were awarded also.

Commission photos by Kesteloo

Jess Fleming, eleventh grade grand prize winner from Grundy High, is shown receiving his \$50 check from Governor Battle



Dr. Dawell Howard, Superintendent of Public Instruction, points out to the group that the future of our resources and our nation is in their hands

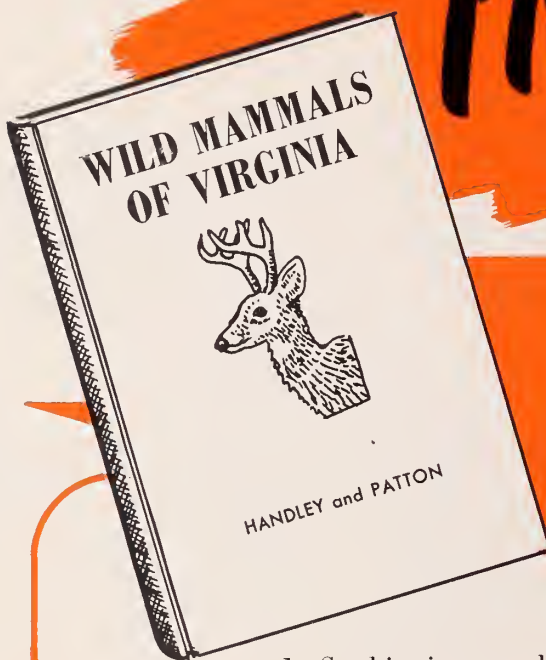


Speakers for the day included (left to right) Dr. P. D. Sanders, editor of *The Southern Planter*, Poul Peters, I.W.L.A. representative from Arlington, and Ross O. Walker, of the State Water Control Board



THIS MOST UP-TO-DATE BOOK
on the identification, distribution and
characteristics of the wild mammals
of Virginia CAN NOW BE YOURS!

FREE



*Here's all you
have to do -*

1. Send in six new subscriptions to VIRGINIA WILDLIFE at the regular rates of:
\$1.00 for 1 year
1.50 for 2 years
2.00 for 3 years
2. We will forward one copy of the book, "Wild Mammals of Virginia," by return mail.
3. Be sure that you list the correct names and addresses of each subscriber and your name and address.
4. Make checks payable to: "Treasurer of Virginia."

This offer lasts only until the limited
supply of books is depleted.

*Get your subscriptions
in NOW!*

Mail Subscriptions to:
VIRGINIA WILDLIFE

BOX 1642
RICHMOND 13, VIRGINIA

